

March 2009
FACT SHEET
Authorization to Discharge under the
National Pollutant Discharge Elimination System
for the
Bureau of Indian Affairs – Hunter’s Point Boarding School Wastewater Treatment Lagoon
NPDES Permit No. NN0110167*

Applicant address: U.S. Department of the Interior
Bureau of Indian Affairs (BIA)
Navajo Regional Office
Division of Environmental, Cultural, and Safety Management
P.O. Box 1060
Gallup, New Mexico 87305

Applicant Contact: Jean Romancito, Environmental Protection Specialist
(505) 863-8330

Facility Address: Hunter’s Point Boarding School
Route 12, Box 99
St. Michael’s, AZ 86504

Facility Contact: Albert Becenti, Facility Manager
(928) 871-4439

I. Summary

The BIA was issued a National Pollutant Discharge Elimination System (NPDES) Permit (No. AZ0110167) on November 30, 2000 for its Hunters Point Boarding School wastewater treatment lagoon facility, pursuant to the EPA regulations set forth in Title 40, Code of Federal Regulations (CFR) Part 122.21. The permit was effective December 16, 2000, through midnight, December 17, 2005. BIA applied to the U.S. Environmental Protection Agency (US EPA) Region 9 for reissuance on August 26, 2005. Pursuant to 40 CFR 122.6, the 2000 permit is administratively continued pending reissuance by the EPA. All the terms and conditions of the 2000 permit are in effect until the reissuance of a new permit. This fact sheet is based on information provided by the applicant through its application and discharge data submittal, along with the appropriate laws and regulations.

Pursuant to Section 402 of the Clean Water Act (CWA), the USEPA is proposing issuance of the NPDES permit renewal to BIA Hunter’s Point Boarding School (permittee) for the discharge of treated domestic wastewater to Black Creek, a tributary to the Puerco River, and eventual tributary to the Little Colorado River, a water of the United States.

** The National Pollutant Discharge Elimination System (NPDES) permit number for this facility had been changed from AZ0110167 to NN0110167 in December 2005. The discharger was notified of the change. The two-letter prefix of the permit number is being replaced with NN for its state code to provide for more efficient data management.*

II. Description of Facility

The BIA Hunters Point Boarding School's wastewater treatment lagoons are located 6 miles south of St. Michael's, Arizona. The Boarding school serves a population of 200 students, faculty and staff, receives only domestic wastewater, and averages a design flow of 0.014 million gallons per day (MGD). The August 2005 permit application indicated a design capacity number that had been rounded down to 0.01 MGD; however, to maintain consistency in determining permit limits, EPA will use the previously stated number of 0.014 MGD. The surrounding community is serviced by a separate lagoon system owned and operated by the Navajo Nation EPA. The Hunter's Point treatment facility consists of a two-cell, gravity flow evaporation system with aeration. Wastewater flows by gravity to a collector, which directs the flow into Cell 1, where solids are allowed to settle. Micro-organisms begin digestion of the solids while the liquid portion of the waste stream evaporates to the atmosphere. Effluent leaves Cell 1 through a transfer pipe and enters Cell 2 for final treatment and polishing, as well as additional aeration and evaporation time prior to discharge. Final treatment consists of chlorination prior to discharge. The discharge from Cell 2 (Outfall No. 001) flows to Black Creek, a tributary to the Puerco River, a tributary to the Little Colorado River.

According to the August 2005 application, a June 2005 visual observation by a BIA contractor noted no flow at the discharge or in the receiving waters for several hundred yards downstream. Cell 2 was wet but there was no standing water while Cell 1 was approximately three-quarters full. The facility manager at the plant indicated that there had been no discharge for more than 3 years since 2002 due to local weather patterns in the region which is suffering from a long-term drought.

Although BIA is a federal facility and not a publicly-owned treatment works (POTW), EPA will be proposing federal discharge limits as those that are applicable to POTWs. Any sampling and monitoring under the proposed permit shall be performed at Outfall No. 001.

III. Basis of Proposed Permit Requirements

Section 301 of the CWA established a required performance level, referred to as "secondary treatment," that all POTWs were required to meet by July 1, 1977. Federal secondary treatment effluent standards for POTWs are contained in Section 301(b)(1)(B) of the CWA. Implementing regulations for Section 301(b)(1)(B) are found at 40 CFR Part 133. The CWA requires POTWs to meet performance-based requirements based on available wastewater treatment technology. These technology-based effluent limits apply to all municipal wastewater treatment plants, and identify the minimum level of effluent quality attainable by secondary treatment in terms of BOD₅ and TSS. The requirements contained in the draft permit are necessary to prevent violations of applicable treatment standards.

In accordance with 40 CFR 122.44(d), the need for discharge limitations for all pollutants that may impact applicable water quality criteria and water quality standards must be evaluated. As part of this evaluation, discharge limitations are based on application of the water quality standards. EPA approved the 1999 Navajo Nation Surface Water Quality Standards ("NNSWQS"), on March 23, 2006. The NNSWQS were revised and promulgated by NNEPA on July 30, 2004 for waters of the Navajo Nation. The approved 1999 Navajo Nation water

quality standards and 2004 revisions will be used on a best professional judgment (ABPJ@) basis for purposes of developing water quality based effluent limitations. The requirements contained in the proposed permit are necessary to prevent violations of applicable water quality standards.

IV. Designated Uses of the Receiving Water

The designated uses of the receiving water (Black Creek, the Puerco River and the Little Colorado River), are defined by the NNSWQS as primary human contact, secondary human contact, aquatic habitat, and livestock and wildlife watering (Table 204.1, page 19.)

V. Determination of Effluent Limitations, Monitoring, and Reporting Requirements

A. Flow Rates

Under the proposed permit, there is no flow limit, but the flow must be monitored and reported. The monitoring frequency is once per discharge.

B. Five-Day Biochemical Oxygen Demand (BOD₅)

Under the proposed permit, the discharge shall not exceed a weekly average of 45 mg/l and a monthly average of 30 mg/l BOD₅, and shall achieve no less than a monthly average rate of 85% removal. These limits are consistent with those in the previous permit and are required under 40 CFR Section 133.102(a).

Under 40 CFR Section 122.45(f), mass limits are required for BOD₅. Based upon the 0.014 MGD flow, the mass limits for BOD₅ are based on the following calculations:

Monthly average

$$\frac{0.014 \text{ MG}}{\text{day}} \times \frac{30 \text{ mg}}{\text{l}} \times \frac{8.345 \text{ lb/MG}}{1 \text{ mg/l}} \times \frac{0.45 \text{ kg}}{\text{lb}} = 1.58 \text{ kg per day}$$

Weekly average

$$\frac{0.014 \text{ MG}}{\text{day}} \times \frac{45 \text{ mg}}{\text{l}} \times \frac{8.345 \text{ lb/MG}}{1 \text{ mg/l}} \times \frac{0.45 \text{ kg}}{\text{lb}} = 2.37 \text{ kg per day}$$

The facility discharge has been deemed intermittent with no discharge in many years. The monitoring frequency is once per discharge, consistent with the previous permit. EPA is adding a clarification that should the event of a continuous discharge occur over several days or more than one discrete or separate discharge in a month, the monitoring frequency should be no more than once per month. If no discharge occurs, no monitoring is required.

C. Total Suspended Solids (TSS)

Under the proposed permit, the discharge shall not exceed a weekly average of 45

mg/l and a monthly average of 30 mg/l TSS, and shall achieve no less than a monthly average rate of 85% removal. These limits are consistent with 40 CFR 133.102(b). Mass limit requirements in accordance with 40 CFR 122.45(f) have also been set in the proposed permit. Similar to the calculations for BOD₅, mass loadings for TSS shall not exceed a 7-day average of 2.37 kg per day and a 30-day average of 1.58 kg per day. The monitoring frequency is once per discharge, consistent with the previous permit. As discussed in the monitoring frequency for BOD₅ above, the added clarification of no more than once per month applies.

D. Escherichia coli (*E. coli*)

In the proposed permit, the monthly geometric mean of *E. coli* shall not exceed 126/100 ml and 235/100 ml as a single sample maximum. These limits are based on the NNSWQS for primary human contact (p. 26). The previous permit utilized fecal coliform bacteria (FCB) values but the amended NNSWQS replaced FCB with *E. coli*. The monitoring frequency is once per discharge. As discussed in the monitoring frequency for BOD₅ above, the added clarification of no more than once per month applies.

E. Total Residual Chlorine (TRC)

The permit requires chlorination of the effluent before discharge. For the intermittent discharge, no single sample shall exceed 11 µg/l based on the NNSWQS for Black Creek. The monitoring frequency is once per discharge, consistent with the previous permit. As discussed in the monitoring frequency for BOD₅ above, the added clarification of no more than once per month applies.

F. Total Dissolved Solids (TDS)

The regulations at 40 CFR 122.44(i) allows requirements for monitoring as determined to be necessary. The monitoring frequency is once per discharge, consistent with the previous permit. As discussed in the monitoring frequency for BOD₅ above, the added clarification of no more than once per month applies.

G. pH

The proposed permit requires that effluent pH not fall below 6.5 or above 9.0 standard pH units, consistent with the NNSWQS for Black Creek. The monitoring frequency is once per discharge, consistent with the previous permit. As discussed in the monitoring frequency for BOD₅ above, the added clarification of no more than once per month applies.

VI. Reporting

The proposed permit requires discharge data obtained during the previous three months to be summarized on monthly DMR forms and reported quarterly. If there is no discharge for the month, report AC@ in the No Discharge box on the DMR form for that month. These reports are

due January 28, April 28, July 28, and October 28 of each year. Duplicate signed copies of these, and all other reports required herein, shall be submitted to the EPA Region 9 and the Navajo Nation EPA.

VII. General Standards

The proposed permit sets general standards that are narrative water quality standards contained in the Navajo Nation Water Quality Standards, Section 203. These general standards are set forth in Section B. General Discharge Specifications of the permit.

VIII. Permit Reopener

At this time, we have no reason to establish any other water quality-based limits. Should any monitoring indicate that the discharge causes, has the reasonable potential to cause, or contributes to excursion above a water quality criteria, the permit may be reopened for the imposition of water quality-based limits and/or whole effluent toxicity limits. The proposed permit may be modified, in accordance with the requirements set forth at 40 CFR 122.44 and 124.14, to include appropriate conditions or limits to address demonstrated effluent toxicity based on newly available information, or to implement any EPA-approved new Tribal water quality standards.

IX. Biosolids Requirements

The permittee shall submit a report 60 days prior to disposal of biosolids. The report shall discuss the quantity of biosolids produced, the treatment applied to biosolids including process parameters, disposal methods, and, if land applied, analyses for Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Zinc, and Selenium, and organic-N, ammonium-N, and nitrate-N, all expressed in mg/kg biosolids on a 100% dry weight basis. The permittee shall comply with all standards for biosolids use and disposal at Section 405(d) of the CWA, and 40 CFR Parts 257, 258 and 503.

X. Threatened and Endangered Species and Critical Habitat

A. Background:

Section 7 of the Endangered Species Act (ESA) of 1973 requires Federal agencies such as EPA to ensure, in consultation with the U.S. Fish and Wildlife Service (FWS), that any actions authorized, funded or carried out by the Agency are not likely to jeopardize the continued existence of any Federally-listed endangered or threatened species or adversely modify or destroy critical habitat of such species.

Since the issuance of NPDES permits by EPA is a Federal action, consideration of a permitted discharge and its effect on any listed species is appropriate. The proposed NPDES permit authorizes the discharge of treated domestic wastewater into Black Creek which eventually reaches the Little Colorado River, a water of the United States.

The information below is listed in the Navajo Nation's Department of Fish & Wildlife's Natural Heritage Program (NHP) database. The FWS has deferred all of its survey and information collection in the Navajo Nation to the Navajo Nation NHP.

In November 2005, the Navajo Nation NHP had identified four (4) listed, proposed or candidate T or E species that may potentially occur within the facility boundary or on the 7.5 minute quadrangle(s) of the facility boundary. The listed species are listed as follows:

Names (common and scientific)	Status
Mountain plover (<i>Charadrius montanus</i>)	Proposed T
Southwestern willow flycatcher (<i>Empidonax traillii extimus</i>)	E
Black-footed ferret (<i>Mustela nigripes</i>)	E
Mexican spotted owl (<i>Strix occidentalis lucida</i>)	T

The NHP had also identified five (5) Navajo endangered species as follows:

Names (common and scientific)
Flammulated owl (<i>Otus flammeolus</i>)
Golden eagle (<i>Aquila chrysaetos</i>)
Western burrowing owl (<i>Athene cunicularia</i>)
Bluehead sucker (<i>Catostomus discobolus</i>)
Peregrine falcon (<i>Falco peregrinus</i>)

B. EPA's Finding:

This permit authorizes the discharge of treated wastewater in conformance with the federal secondary treatment regulations and the Navajo Nation Surface Water Quality Standards. These standards are applied in the permit both as numeric and narrative limits. The standards are designed to protect aquatic species, including threatened and endangered species, and any discharge in compliance with these standards should not adversely impact any threatened and endangered species.

EPA believes effluent released in compliance with this permit will have no effect on any federally-listed threatened or endangered species or its critical habitat that may be present in the vicinity of the discharge. The treatment facility has been in existence for some time, and no new construction or modifications will be made to it due to the proposed NPDES permit. Therefore, no requirements specific to the protection of endangered species are proposed in the permit. EPA may decide that changes to the permit may be warranted based on receipt of new information. A re-opener clause has been included should new information become available to indicate that the requirements of the permit need to be changed.

XI. Administrative Information -- Public Notice, Public Comments, and Requests for Public Hearings

In accordance with 40 CFR 124.10, public notice shall be given by the U.S. EPA that a draft NPDES permit has been prepared by mailing a copy of the notice to the permit applicant and other Federal and State agencies, and through publication of a notice in a daily or weekly newspaper within the area affected by the facility. The public notice shall allow at least 30 days for public comment on the draft permit.

In accordance with 40 CFR 124.11 and 12, during the public comment period, any interested person may submit written comments on the draft permit, and may request a public hearing if no hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. In accordance with 40 CFR 124.13, all persons must raise all reasonably ascertainable issues and submit all reasonably available arguments supporting their position within thirty (30) days from the date of the public notice. Comments may be received either in person or mailed to:

U.S. Environmental Protection Agency, Region IX
NPDES Permits Office (WTR-5)
Attn: Linh Tran
75 Hawthorne Street
San Francisco, CA 94105
Telephone: (415) 972-3511

Interested persons may obtain further information, including copies of the draft permit, fact sheet/statement of basis, and the permit application, by contacting Linh Tran (WTR-5) at the U.S. EPA address, above. Copies of the administrative record (other than those which U.S. EPA maintains as confidential) are available for public inspection between 8:00 a.m. and 4:30 p.m., Monday through Friday (excluding federal holidays).

In accordance with 40 CFR 124.12, the U.S. EPA shall hold a public hearing when, on the basis of requests, a significant degree of public interest in the draft permit exists. The Director may also hold a public hearing when, for instance, such a hearing might clarify one or more issues involved in the permit decision. Public notice of such hearing shall be given as specified in 40 CFR 124.10.